0311860003/Cook County
Detrex Chemical Industries
Gold Shield Solvents
ILD 074424938

Hazard Ranking System

Preliminary Score
Projected Score

~~Confidential~~ Re

Releasable
10/24/16

RELEASED
DATE 10/24/16
RIN #
INITIALS

Facility name: Detrex Chemical Industries - Gold Shield Solvents

Location: 2537 LeMoyne Street, Melrose Park, Cook Co., IL 60160

EPA Region: 5

Person(s) in charge of the facility: Daniel Anderson, Branch Manager

Donna Cook, Manager/Secretary

Name of Reviewer: Timothy J. Murphy Date: 3/30/90

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Gold Shield Solvents has been a transfer and storage facility of F001 and F002 wastes since 1974. The facility consist of a warehouse and receiving dock with a 500 ~~gallon~~ drum waste storage area. In an area behind (North) the warehouse, rail cars unload trichloroethylene, possible spillage could lead to GW contamination. Pipes under the administrative offices could lead to an UST, which may be leaking

Scores: S_M = (S_{gw} = S_{sw} = S_a =)

S_{FE} = See following pages

S_{DC} =

HRS COVER SHEET

Site Name: Detrex Chemical Industries Gold Shield Solvents
ILD#: 07442438

RECOMMENDATIONS

Based on the HRS related information and other pertinent information, the Illinois Environmental Protection Agency concludes from its activities the following (select one):

_____ 1. The HRS scores are below 25.00, therefore the site should be designated as a NFRAP facility.

_____ 2. The HRS scores are below 25.00, but due to extenuating circumstances (i.e., on-site exposure) the site should be designated for SSI activities.

X 3. The HRS scores are equal to or exceed 25.00, but due to extenuating circumstances (i.e., on-going clean-up) the site should not be designated for SSI activities. RCRA will address potential contamination

_____ 4. The HRS scores are equal to or exceed 25.00. As a result, we recommend that the site be designated as a potential SSI candidate.

WORKSHEET FOR COMPUTING S_M

PRELIMINARY SCORE

	S	S^2
Groundwater Route Score (S_{gw})	13.92	193.7
Surface Water Route Score (S_{sw})	3.19	10.1
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		203.8
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		14.27
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		8.25

PROJECTED SCORE

	S	S^2
Groundwater Route Score (S_{gw})	31.32	980.9
Surface Water Route Score (S_{sw})	7.97	63.5
Air Route Score (S_a)	34.62	1198.5
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2242.9
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		47.36
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		27.38

PRELIMINARY SCORE

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref.
[1] Observed Release	0 45	1	0		1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					
Depth to Aquifer of Concern	0 1 (2) 3	2	4	51'	3
Net Precipitation	0 1 (2) 3	1	2	5'	2
Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	silty clay	3
Physical State	0 1 2 (3)	1	3	liquid	1
Total Route Characteristics Score			10		
[3] Containment	0 1 (2) 3	1	2	cracks, moderately permeable liner	6
[4] Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 (15) 18	1	15	PCE	2
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	500+ drums 05/18/81 IEPA Inspection	1
Total Waste Characteristics Score			19		
[5] Targets					
Ground Water Use	0 1 2 (3)	3	9	drinking water	4
Distance to Nearest Well/Population Served	0 4 6 8 10 / (12) 16 18 20 / 24 30 32 35 40	1	12	Buckhorn Ranch MHP	4
				1-2 miles	
Total Targets Score			21		
[6] If line [1] is 45, multiply [1] x [4] x [5]. If line [1] is 0, multiply [2] x [3] x [4] x [5]			7980		
[7] Divide line [6] by 57,330 and multiply by 100			S_{gw} = 13.92		

GROUND WATER ROUTE WORK SHEET

PROJECTED SCORE

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref.
1 Observed Release	0 45	1	45		
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					
Depth to Aquifer of Concern	0 1 2 3	2			
Net Precipitation	0 1 2 3	1			
Permeability of the Unsaturated Zone	0 1 2 3	1			
Physical State	0 1 2 3	1			
Total Route Characteristics Score					
3 Containment	0 1 2 (3)	1	3	Spills, Lust	6
4 Waste Characteristics			15		2
Toxicity/Persistence	0 3 6 9 12 (15) 18	1			
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4		1
Total Waste Characteristics Score			19		
5 Targets			9		4
Ground Water Use	0 1 2 (3)	3			
Distance to Nearest Well/Population Served	0 4 6 8 10 (12) 16 18 20 24 30 32 35 40	1	12		4
Total Targets Score			21		
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			17,955		
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 31.32		

GROUND WATER ROUTE WORK SHEET

PRELIMINARY SCORE

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref.
[1] Observed Release	0 45	1	0		
If observed release is given a value of 45, proceed to line [4]. If observed release is given a value of 0, proceed to line [2].					
[2] Route Characteristics			0	terrain ave. slope ≤ 3%	5
Facility Slope and Intervening Terrain	(0) 1 2 3	1	2	≤ 2.5"	2
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	4	East Silver Creek 2,400'	5
Distance to Nearest Surface Water	0 1 (2) 3	2	3	liquid	1
Physical State	0 1 2 (3)	1			
Total Route Characteristics Score			9		
[3] Containment	0 1 (2) 3	1	2	cracks in containment system	6
[4] Waste Characteristics			15	PCE	2
Toxicity/Persistence	0 3 6 9 12 (15) 18	1	4	500+ drums 05/18/81 IEPA Inspection	1
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1			
Total Waste Characteristics Score			19		
[5] Targets			6	recreation	4,5
Surface Water Use	0 1 (2) 3	3	0		
Distance to a Sensitive Environment	(0) 1 2 3	2	0		
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1			
Total Targets Score			6		
[6] If line [1] is 45, multiply [1] x [4] x [5]. If line [1] is 0, multiply [2] x [3] x [4] x [5]			2052		
[7] Divide line [6] by 64,350 and multiply by 100		S_{sw} =	3.19		

SURFACE WATER ROUTE WORK SHEET

PROJECTED SCORE

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref.
1 Observed Release	0 45	1	45		
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					
Facility Slope and Intervening Terrain	0 1 2 3	1			
1-yr. 24-hr. Rainfall	0 1 2 3	1			
Distance to Nearest Surface Water	0 1 2 3	2			
Physical State	0 1 2 3	1			
Total Route Characteristics Score					
3 Containment	0 1 2 (3)	1	3	Spills, LUST	6
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 (15) 18	1	15		2
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	4		1
Total Waste Characteristics Score			19		
5 Targets			6		4,5
Surface Water Use	0 1 (2) 3	3			
Distance to a Sensitive Environment	(0) 1 2 3	2	0		
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0		
Total Targets Score			6		
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			5130		
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 7.97		

SURFACE WATER ROUTE WORK SHEET

Preliminary
~~PROJECTED~~ SCORE

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref.
[1] Observed Release	0 45	1	0		
Date and Location:					
Sampling Protocol:					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					
Reactivity and Incompatibility	(0) 1 2 3	1	0		2
Toxicity	0 1 (2) 3	3	6	PCE	2
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	500+ drums	1
	Total Waste Characteristics Score		10		
[3] Targets					
Population Within 4-Mile Radius	0 9 12 15 18 / 21 (24) 27 30	1	24	>10,000 w/in mile	5
			0		
Distance to Sensitive Environment	(0) 1 2 3	2			
Land Use	0 1 2 (3)	1	3	< ¼ commercial	6
	Total Targets Score		27		
[4] Multiply [1] x [2] x [3]					
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

AIR ROUTE WORK SHEET

Projected
~~PRELIMINARY~~ SCORE

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref.
[1] Observed Release	0 45	1	45		
Date and Location:					
Sampling Protocol:					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					
Reactivity and Incompatibility	(0) 1 2 3	1	0		2
Toxicity	0 1 (2) 3	3	6		2
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4		1
	Total Waste Characteristics Score		10		
[3] Targets					
Population Within 4-Mile Radius	0 9 12 15 18 / 21 (24) 27 30	1	24		5
Distance to Sensitive Environment	(0) 1 2 3	2	0		
Land Use	0 1 2 (3)	1	3		6
	Total Targets Score		27		
[4] Multiply [1] x [2] x [3]			12,150		
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 34.62			

AIR ROUTE WORK SHEET

PRELIMINARY SCORE

Direct Contact Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref.
1 Observed Incident	(0) 45	1	0		
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 2 3	1	0		
3 Containment	0 15	1			
4 Waste Characteristics Toxicity	0 1 2 3	5			
5 Targets					
Population Within a 1-Mile Radius	0 1 2 3 4 5	4			
Distance to a Critical Habitat	0 1 2 3	4			
	Total Targets Score				
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5					
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 0			

DIRECT CONTACT WORK SHEET

HRS DOCUMENTATION LOG SHEET

SITE NAME: Gold Shield Solvents
CITY: Melrose Park STATE IL
IDENTIFICATION NUMBER: ILD 074424938

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
1	IEPA DLPC file 0311860003
2	HRS Users Manual
3	IDOT Boring logs
4	IEPA DPWS files
5	USGS Topographic Maps
6	Visual Site Inspection 03/20/90

KP:tk:4/8/11